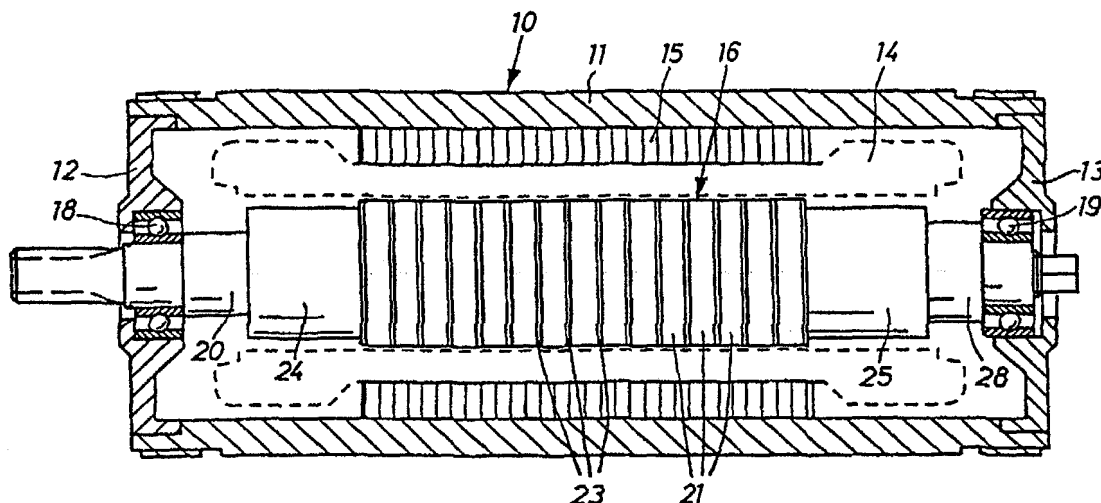




## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 7 : <b>H02K 1/27</b>	<b>A1</b>	(11) International Publication Number: <b>WO 00/59097</b> (43) International Publication Date: 5 October 2000 (05.10.00)
<p>(21) International Application Number: PCT/SE00/00591</p> <p>(22) International Filing Date: 27 March 2000 (27.03.00)</p> <p>(30) Priority Data: 9901107-4 26 March 1999 (26.03.99) SE</p> <p>(71) Applicant (for all designated States except US): ATLAS COPCO CONTROLS AB [SE/SE]; Solkraftsvägen 13, S-135 70 Stockholm (SE).</p> <p>(72) Inventor; and (75) Inventor/Applicant (for US only): NILSON, Thord, Agne, Gustaf [SE/SE]; Långsjövägen 2B, S-135 54 Tyresö (SE).</p> <p>(74) Agent: PANTIZAR, Tord; Atlas Copco Tools AB, S-105 23 Stockholm (SE).</p>	<p>(81) Designated States: US, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).</p> <p><b>Published</b> <i>With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i></p>	

(54) Title: ROTOR FOR A HIGH SPEED PERMANENT MAGNET MOTOR



## (57) Abstract

A rotor for a high speed permanent magnet motor comprises a central spindle (20), a plurality of magnet discs (21) stacked on the spindle (20) and axially clamped by a clamping device (24-26, 28) on the spindle (20) to form an axially pre-tensioned disc packet core (16), each magnet disc (21) has at least one electrically insulating layer, wherein between the magnet discs (21) and/or between one magnet disc (21) and the clamping device (24-26, 28) there are located a reinforcement discs (23) of a high-strength material, and the reinforcement discs (23) are clamped between the magnetic discs (21) or between one magnet disc (21) and the clamping device (24-26, 28) such that a clamping force generated frictional engagement is obtained between the reinforcement discs (23) and the magnet discs (21) by which centrifugal forces are transferred from the magnet discs (21) to the reinforcement discs (23) during motor operation, thereby relieving the magnet discs (21) of tensile stress.